

SE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/336,091

DATE: 06/29/1999  
TIME: 16:25:48

Input Set: I336091.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

ENTERED

1 <110> APPLICANT: Van Snick, Jacques  
2 Leth, Bernard  
3 Chaux, Pascal  
4 Boon-Falleur, Thierry  
5 van der Bruggen, Pierre  
6 <120> TITLE OF INVENTION: MAGE-A1 PEPTIDES PRESENTED BY HLA CLASS  
7 II MOLECULES  
8 <130> FILE REFERENCE: L0461/7063  
9 <140> CURRENT APPLICATION NUMBER: US/09/336,091  
10 <141> CURRENT FILING DATE: 1999-06-18  
11 <160> NUMBER OF SEQ ID NOS: 72  
12 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
13 <210> SEQ ID NO 1  
14 <211> LENGTH: 1624  
15 <212> TYPE: DNA  
16 <213> ORGANISM: Homo sapiens  
17 <400> SEQUENCE: 1  
18 gttttcaggg gacaggccaa cccagaggac aggattccct ggaggccaca gaggagcacc 60  
19 aaggagaaga tctgcctgtg ggtcttcatt gcccagctcc tgcccacact cctgcctgct 120  
20 gccctgacga gagtcatcat gtctcttgag cagaggagtc tgcactgcaa gcctgaggaa 180  
21 gcccttgagg cccaacaaga ggccctgggc ctgggtgtgtg tgcaggctgc cacctcctcc 240  
22 tcctctcctc tggctcctggg caccctggag gaggtgccca ctgctgggtc aacagatcct 300  
23 ccccagagtc ctcagggagc ctccgccttt ccactacca tcaacttcac tgcacagagg 360  
24 caaccagtg agggttccag cagccgtgaa gaggaggggc caagcacctc ttgtatcctg 420  
25 gagtccttgt tccgagcagt aatcactaag aagggtggctg atttggttgg ttttctgctc 480  
26 ctcaaataatc gagccaggga gccagtcaca aaggcagaaa tgctggagag tgtcatcaaa 540  
27 aattacaagc actgttttcc tgagatcttc ggcaaagcct ctgagtcctt gcagctggtc 600  
28 tttggcattg acgtgaagga agcagacccc accggccact cctatgtcct tgtcacctgc 660  
29 ctaggtctct cctatgatgg cctgctgggt gataatcaga tcatgcccac gacaggcttc 720  
30 ctgataattg tcctggatcat gattgcaatg gagggcggcc atgctcctga ggaggaaatc 780  
31 tgggaggagc tgagtgtgat ggaggtgtat gatgggaggg agcacagtgc ctatggggag 840  
32 cccaggaagc tgctcaccca agatttggtg caggaaaagt acctggagta ccggcaggtg 900  
33 ccggacagtg atcccgcacg ctatgagttc ctgtgggggc caagggccct cgctgaaacc 960  
34 agctatgtga aagtccttga gtatgtgatc aaggtcagtg caagagttcg ctttttcttc 1020  
35 ccatccctgc gtgaagcagc tttgagagag gaggaagagg gagtctgagc atgagttgca 1080  
36 gccaaaggcca gtgggagggg gactgggcca gtgcaccttc cagggccgcg tccagcagct 1140  
37 tcccctgcct cgtgtgacat gaggccatt cttcactctg aagagagcgg tcagtgttct 1200  
38 cagtagtagg tttctgttct attgggtgac ttggagattt atctttgttc tcttttgtaa 1260  
39 ttgttcaaat gttttttttt aagggatggt tgaatgaact tcagcatcca agtttatgaa 1320  
40 tgacagcagt cacacagttc tgtgtatata gtttaagggt aagagtcttg tgttttatc 1380  
41 agattgggaa atccattcta ttttgtgaat tgggataata acagcagtgg aataagtact 1440  
42 tagaaatgtg aaaaatgagc agtaaaatag atgagataaa gaactaaaga aattaagaga 1500  
43 tagtcaattc ttgccttata cctcagtcta ttctgtaaaa tttttaaaga tatatgcata 1560  
44 cctggatttc cttggcttct ttgagaatgt aagagaaatt aaatctgaat aaagaattct 1620

PAGE: 2

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/336,091

DATE: 06/29/1999  
TIME: 16:25:48

Input Set: I336091.RAW

1624

```

45      tcct
46      <210> SEQ ID NO 2
47      <211> LENGTH: 309
48      <212> TYPE: PRT
49      <213> ORGANISM: Homo sapiens
50      <400> SEQUENCE: 2
51      Met Ser Leu Glu Gln Arg Ser Leu His Cys Lys Pro Glu Glu Ala Leu
52      1          5          10          15
53      Glu Ala Gln Gln Glu Ala Leu Gly Leu Val Cys Val Gln Ala Ala Thr
54      20          25          30
55      Ser Ser Ser Ser Pro Leu Val Leu Gly Thr Leu Glu Glu Val Pro Thr
56      35          40          45
57      Ala Gly Ser Thr Asp Pro Pro Gln Ser Pro Gln Gly Ala Ser Ala Phe
58      50          55          60
59      Pro Thr Thr Ile Asn Phe Thr Arg Gln Arg Gln Pro Ser Glu Gly Ser
60      65          70          75          80
61      Ser Ser Arg Glu Glu Glu Gly Pro Ser Thr Ser Cys Ile Leu Glu Ser
62      85          90          95
63      Leu Phe Arg Ala Val Ile Thr Lys Lys Val Ala Asp Leu Val Gly Phe
64      100         105         110
65      Leu Leu Leu Lys Tyr Arg Ala Arg Glu Pro Val Thr Lys Ala Glu Met
66      115         120         125
67      Leu Glu Ser Val Ile Lys Asn Tyr Lys His Cys Phe Pro Glu Ile Phe
68      130         135         140
69      Gly Lys Ala Ser Glu Ser Leu Gln Leu Val Phe Gly Ile Asp Val Lys
70      145         150         155         160
71      Glu Ala Asp Pro Thr Gly His Ser Tyr Val Leu Val Thr Cys Leu Gly
72      165         170         175
73      Leu Ser Tyr Asp Gly Leu Leu Gly Asp Asn Gln Ile Met Pro Lys Thr
74      180         185         190
75      Gly Phe Leu Ile Ile Val Leu Val Met Ile Ala Met Glu Gly Gly His
76      195         200         205
77      Ala Pro Glu Glu Glu Ile Trp Glu Glu Leu Ser Val Met Glu Val Tyr
78      210         215         220
79      Asp Gly Arg Glu His Ser Ala Tyr Gly Glu Pro Arg Lys Leu Leu Thr
80      225         230         235         240
81      Gln Asp Leu Val Gln Glu Lys Tyr Leu Glu Tyr Arg Gln Val Pro Asp
82      245         250         255
83      Ser Asp Pro Ala Arg Tyr Glu Phe Leu Trp Gly Pro Arg Ala Leu Ala
84      260         265         270
85      Glu Thr Ser Tyr Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala
86      275         280         285
87      Arg Val Arg Phe Phe Phe Pro Ser Leu Arg Glu Ala Ala Leu Arg Glu
88      290         295         300
89      Glu Glu Glu Gly Val
90      305
91      <210> SEQ ID NO 3
92      <211> LENGTH: 16
93      <212> TYPE: PRT
94      <213> ORGANISM: Homo sapiens

```

AGE: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/336,091

DATE: 06/29/1999

TIME: 16:25:48

Input Set: I336091.RAW

```
95  <400> SEQUENCE: 3
96      Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe
97      1              5              10              15
98  <210> SEQ ID NO 4
99  <211> LENGTH: 16
100 <212> TYPE: PRT
101 <213> ORGANISM: Homo sapiens
102 <400> SEQUENCE: 4
103      Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe Phe Phe Pro Ser
104      1              5              10              15
105 <210> SEQ ID NO 5
106 <211> LENGTH: 12
107 <212> TYPE: PRT
108 <213> ORGANISM: Homo sapiens
109 <400> SEQUENCE: 5
110      Glu Thr Ser Tyr Val Lys Val Leu Glu Tyr Val Ile
111      1              5              10
112 <210> SEQ ID NO 6
113 <211> LENGTH: 12
114 <212> TYPE: PRT
115 <213> ORGANISM: Homo sapiens
116 <400> SEQUENCE: 6
117      Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala
118      1              5              10
119 <210> SEQ ID NO 7
120 <211> LENGTH: 12
121 <212> TYPE: PRT
122 <213> ORGANISM: Homo sapiens
123 <400> SEQUENCE: 7
124      Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe
125      1              5              10
126 <210> SEQ ID NO 8
127 <211> LENGTH: 12
128 <212> TYPE: PRT
129 <213> ORGANISM: Homo sapiens
130 <400> SEQUENCE: 8
131      Lys Val Ser Ala Arg Val Arg Phe Phe Phe Pro Ser
132      1              5              10
133 <210> SEQ ID NO 9
134 <211> LENGTH: 12
135 <212> TYPE: PRT
136 <213> ORGANISM: Homo sapiens
137 <400> SEQUENCE: 9
138      Arg Val Arg Phe Phe Phe Pro Ser Leu Arg Glu Ala
139      1              5              10
140 <210> SEQ ID NO 10
141 <211> LENGTH: 12
142 <212> TYPE: PRT
143 <213> ORGANISM: Homo sapiens
144 <400> SEQUENCE: 10
```

PAGE: 4

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/336,091

DATE: 06/29/1999  
TIME: 16:25:48

Input Set: I336091.RAW

```

145      Phe Phe Pro Ser Leu Arg Glu Ala Ala Leu Arg Glu
146      1                      5                      10
147  <210> SEQ ID NO 11
148  <211> LENGTH: 13
149  <212> TYPE: PRT
150  <213> ORGANISM: Homo sapiens
151  <400> SEQUENCE: 11
152      Leu Arg Glu Ala Ala Leu Arg Glu Glu Glu Gly Val
153      1                      5                      10
154  <210> SEQ ID NO 12
155  <211> LENGTH: 36
156  <212> TYPE: DNA
157  <213> ORGANISM: Homo sapiens
158  <400> SEQUENCE: 12
159      gagtatgtga tcaagggtcag tgcaagagtt cgcttt
160  <210> SEQ ID NO 13
161  <211> LENGTH: 16
162  <212> TYPE: PRT
163  <213> ORGANISM: Homo sapiens
164  <400> SEQUENCE: 13
165      Tyr Val Lys Val Leu Glu His Val Val Arg Val Asn Ala Arg Val Arg
166      1                      5                      10                      15
167  <210> SEQ ID NO 14
168  <211> LENGTH: 16
169  <212> TYPE: PRT
170  <213> ORGANISM: Homo sapiens
171  <400> SEQUENCE: 14
172      Leu Glu His Val Val Arg Val Asn Ala Arg Val Arg Ile Ala Tyr Pro
173      1                      5                      10                      15
174  <210> SEQ ID NO 15
175  <211> LENGTH: 9
176  <212> TYPE: PRT
177  <213> ORGANISM: Homo sapiens
178  <400> SEQUENCE: 15
179      Glu Ala Asp Pro Thr Gly His Ser Tyr
180      1                      5
181  <210> SEQ ID NO 16
182  <211> LENGTH: 9
183  <212> TYPE: PRT
184  <213> ORGANISM: Homo sapiens
185  <400> SEQUENCE: 16
186      Ser Leu Phe Arg Ala Val Ile Thr Lys
187      1                      5
188  <210> SEQ ID NO 17
189  <211> LENGTH: 9
190  <212> TYPE: PRT
191  <213> ORGANISM: Homo sapiens
192  <400> SEQUENCE: 17
193      Asn Tyr Lys His Cys Phe Pro Glu Ile
194      1                      5

```

36



PAGE: 5

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/336,091DATE: 06/29/1999  
TIME: 16:25:48

Input Set: I336091.RAW

```
195 <210> SEQ ID NO 18
196 <211> LENGTH: 10
197 <212> TYPE: PRT
198 <213> ORGANISM: Homo sapiens
199 <400> SEQUENCE: 18
200     Glu Val Tyr Asp Gly Arg Glu His Ser Ala
201         1             5             10
202 <210> SEQ ID NO 19
203 <211> LENGTH: 10
204 <212> TYPE: PRT
205 <213> ORGANISM: Homo sapiens
206 <400> SEQUENCE: 19
207     Arg Glu Pro Val Thr Lys Ala Glu Met Leu
208         1             5             10
209 <210> SEQ ID NO 20
210 <211> LENGTH: 9
211 <212> TYPE: PRT
212 <213> ORGANISM: Homo sapiens
213 <400> SEQUENCE: 20
214     Asp Pro Ala Arg Tyr Glu Phe Leu Trp
215         1             5
216 <210> SEQ ID NO 21
217 <211> LENGTH: 9
218 <212> TYPE: PRT
219 <213> ORGANISM: Homo sapiens
220 <400> SEQUENCE: 21
221     Ser Ala Phe Pro Thr Thr Ile Asn Phe
222         1             5
223 <210> SEQ ID NO 22
224 <211> LENGTH: 9
225 <212> TYPE: PRT
226 <213> ORGANISM: Homo sapiens
227 <400> SEQUENCE: 22
228     Ser Ala Tyr Gly Glu Pro Arg Lys Leu
229         1             5
230 <210> SEQ ID NO 23
231 <211> LENGTH: 14
232 <212> TYPE: PRT
233 <213> ORGANISM: Homo sapiens
234 <400> SEQUENCE: 23
235     Leu Leu Lys Tyr Arg Ala Arg Glu Pro Val Thr Lys Ala Glu
236         1             5             10
237 <210> SEQ ID NO 24
238 <211> LENGTH: 10
239 <212> TYPE: PRT
240 <213> ORGANISM: Homo sapiens
241 <400> SEQUENCE: 24
242     Tyr Leu Gln Leu Val Phe Gly Ile Glu Val
243         1             5             10
244 <210> SEQ ID NO 25
```

PAGE: 6

VERIFICATION SUMMARY  
PATENT APPLICATION US/09/336,091

DATE: 06/29/1999  
TIME: 16:25:48

Input Set: I336091.RAW

Line ? Error/Warning

Original Text

-----